

**TEMPERATURE MEASURING DEVICE AND  
SYSTEM AND METHOD INCORPORATING  
THE SAME**

**ABSTRACT**

**[0036]** A system having a heat source, a component coupled to the heat source, and at least one thermistor coupled to the component and adapted to monitor temperature of the component, wherein the thermistor has a core-shell microstructure having a shell disposed about a core, the core comprising  $\text{Cr}_2\text{O}_3$  and the shell comprising a rare earth element compound.